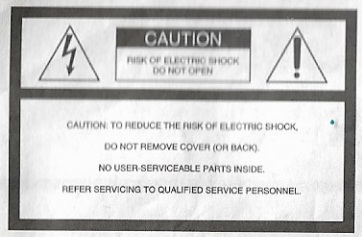
WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For the Customers in the U.S.A.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Never expose the battery pack to temperature above 140°F (60°C), such as in a car parked in the sun or under direct sunlight.

If you have any questions about this product, you may call:
Sony Customer Information Center
1-800-222-SONY (7669)
The number below is for the FCC related matters only.

Regulatory Information

Declaration of Conformity

Trade Name:	SONY
Model No.:	DSC-P1
Responsible Party:	Sony Electronics Inc.
Address:	1 Sony Drive, Park Ridge, NJ, 07656 USA
Telephone No.:	201-930-6972

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.
— Increase the separation between the equipment and receiver.
— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
— Consult the dealer or an experienced radio/TV technician for help.

The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For the Customers in the U.S.A. and Canada

DISPOSAL OF LITHIUM ION BATTERY.
LITHIUM ION BATTERY.
DISPOSE OF PROPERLY.

You can return your unwanted lithium ion batteries to your nearest Sony Service Center or Factory Service Center.

Note:
In some areas the disposal of lithium ion batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you call 1-800-222-SONY (United States only)
For the Sony Factory Service Center nearest you call 416-499-SONY (Canada only)

Caution:
Do not handle damaged or leaking lithium ion battery.

CAUTION
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

Attention for the Customers in Europe

This product has been tested and found compliant with the limits sets out on the EMC Directive for using connection cables shorter than 3 meters.

The electromagnetic fields at the specific frequencies may influence the picture and sound of this camera.

NOTICE FOR THE CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS 1362, (i.e. marked with ASTA or ♡ mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

For the Customers in Germany

Directive: EMC Directive 89/336/EEC.92/31/EEC
This equipment complies with the EMC regulations when used under the following circumstances:
• Residential area
• Business district
• Light-industry district
(This equipment complies with the EMC standard regulations EN55022 Class B.)

"Memory Stick"

CE N50

For the Customers in CANADA

This Class B digital apparatus complies with Canadian ICES-003.

"Memory Stick" and Battery Pack

For the Customers in the U.S.A.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Battery pack

For the Customers in the U.S.A. and Canada

THIS CLASS B DIGITAL DEVICE COMPLIES WITH PART 15 OF THE FCC RULES AND THE CANADIAN ICES-003 OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Be sure to read the following before using your camera

Trial recording

Before you record one-time events, you may want to make a trial recording to make sure that the camera is working correctly.

No compensation for contents of the recording

Contents of the recording cannot be compensated for if recording or playback is not possible due to a malfunction of your camera, etc.

Notes on image data compatibility

- This camera conforms with the Design Rules for Camera File Systems universal standard established by the JEIDA (Japan Electronic Industries Development Association). You cannot play back on your camera still images recorded on other equipment (DCR-TRV890E/TRV900/TRV900E, DSC-D700, DSC-D770) that does not conform with this universal standard. (These models are not sold in some areas.)
- Playback of images recorded with your camera on other equipment and playback of images recorded or edited with other equipment on your camera are not guaranteed.

Precaution on copyright

Television programs, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provision of the copyright laws.

Do not shake or strike the camera

In addition to malfunctions and inability to record images, this may render the "Memory Stick" unusable or image data breakdown, damage or loss may occur.

Do not aim the camera at the sun or other bright light

This may cause irrecoverable damage to your eyes.

LCD screen, finder (only models with a finder) and lens

- The LCD screen and the finder are manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, there may be some tiny black points and/or bright points (white, red, blue or green in color) that constantly appear on the LCD screen and the finder. These points are normal in the manufacturing process and do not affect the recording in any way.
- Be careful when placing the camera near a window or outdoors. Exposing the LCD screen, the finder or the lens to direct sunlight for long periods may cause malfunctions.

Do not get the camera wet

When taking pictures outdoors in the rain or under similar conditions, be careful not to get the camera wet. If moisture condensation occurs, refer to page 56 and follow the instructions on how to remove it before using the camera.

Back up recommendation

To avoid the potential risk of data loss, always copy (back up) data to a disk.

Handling of the movable lens

This camera uses a movable lens.
Be careful not to strike or apply excessive force to the lens portion.

When the camera is used for long periods

Note that the camera body may become hot.

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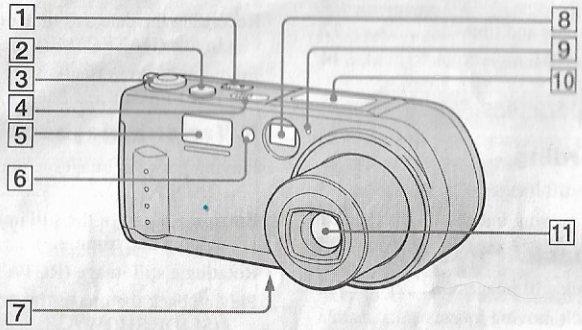
Identifying the parts

See the pages in parentheses for details of operation.



1 **POWER switch/lamp**

2 **Shutter button (15) (21)**

3 **MODE selector (32)**

4 **Built-in microphone**
Do not touch while recording.

5 **Flash (20)**

6 **Photocell window for flash**
Do not block while recording.

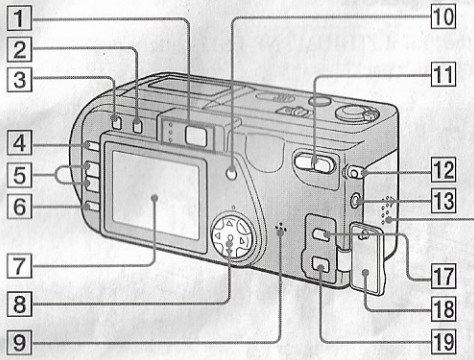
7 **Tripod receptacle (bottom surface)**
Use a tripod with a screw length of less than 9/32 inch (6.5 mm). You will be unable to firmly secure the camera to tripods having longer screws, and may damage the camera.

8 **Finder window**

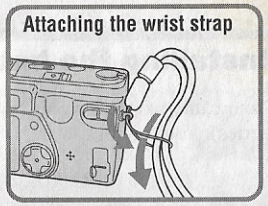
9 **Self-timer/ recording lamp (only during recording moving images)**

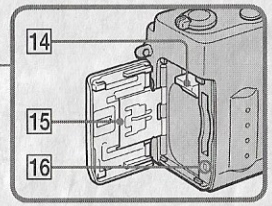
10 **Display window**

11 **Lens**



Attaching the wrist strap





1 **Finder**
Self-timer/recording lamp (red)
AE lock lamp (green)
Strobe charge lamp (orange)

2 **⚡ (flash) button**

3 **🌷 (MACRO) button (43)**

4 **PROGRAM AE button (43)**

5 **VOLUME +/– button**

6 **LCD ON/OFF button**
Set to OFF to save the battery when using the finder.

7 **LCD screen**

8 **Control button**

9 **Speaker**

10 **DISPLAY button**

11 **Zoom button**

12 **Hook for wrist strap**

13 **A/V OUT jack (50)**
Audio output is monaural.

14 **Battery eject lever (8)**

15 **Battery/"Memory Stick" cover**

16 **Access lamp (14)**

17 **USB jack (mini-B) (26) (27)**

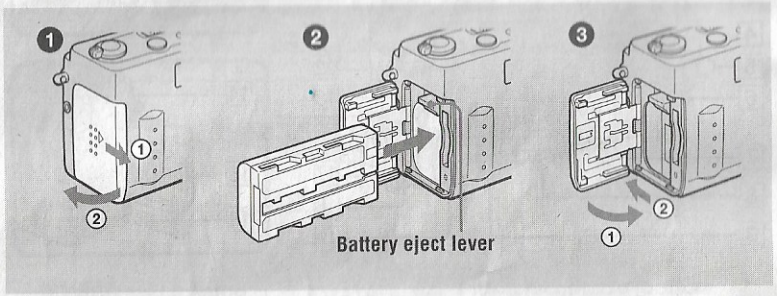
18 **Jack cover**

19 **DC IN jack (9) (11)**

Preparing the power supply

Installing the battery pack

Your camera operates only with the "InfoLITHIUM" NP-FS11 battery pack* (S series). You cannot use any other battery pack.



1 Open the battery/"Memory Stick" cover.
Slide the cover in the direction of the arrow.

2 Install the battery pack.
Insert the battery pack with the ▶ mark facing toward the battery compartment as illustrated.

3 Close the battery/"Memory Stick" cover.

To remove the battery pack

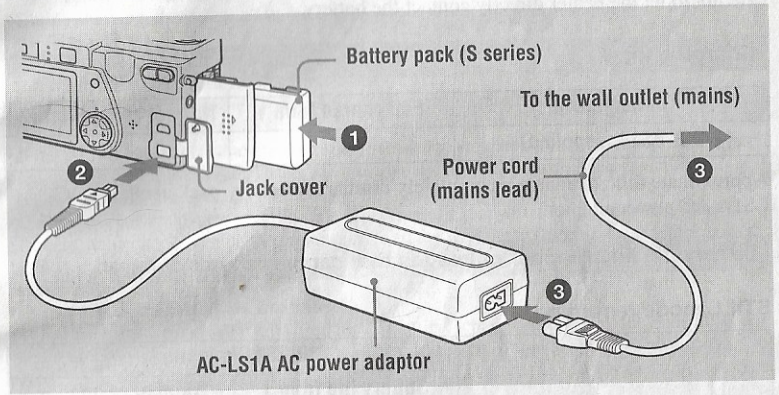
Open the battery/"Memory Stick" cover. Slide the battery eject lever upward, and remove the battery pack.
Be careful not to drop the battery pack when removing it.

**** What is "InfoLITHIUM"?***

"InfoLITHIUM" is a lithium ion battery pack which can exchange information such as battery consumption with compatible video equipment. This unit is compatible with the "InfoLITHIUM" battery pack (S series). "InfoLITHIUM" S series battery packs have the InfoLITHIUM S mark. "InfoLITHIUM" is a trademark of Sony Corporation.

Charging the battery pack

You cannot charge the battery pack while your camera is turned on. Be sure to turn off your camera before charging.



1 Insert the battery pack into your camera.

2 Open the jack cover and connect the DC connecting cable to the DC IN jack of your camera with the ▲ mark facing up.

3 Connect the power cord (mains lead) to the AC power adaptor and then to a wall outlet (mains).
The battery indicator in the display window flashes when charging begins. When the battery indicator stops flashing, **normal charge** is completed. For **full charge**, which allows you to use the battery longer than usual, leave the battery pack inserted for about one hour after normal charge is completed until the battery remaining indicator and "FULL" is displayed alternately in the display window.

After charging

Remove the AC power adaptor.

Battery remaining indicator

The LCD screen on the camera shows the remaining time for which you can still record or play back images.
This indication may not be entirely accurate depending on the conditions of use and the operating environment.
Charging at a room temperature of 50°F to 86°F (10°C to 30°C) is recommended.

NP-FS11 battery pack

When you record images in an extremely cold location or using the LCD screen, the operating time becomes short. When using the camera in an extremely cold location, place the battery pack in your pocket or other place to keep it warm, then insert the battery pack into the camera just before recording. When using a pocket heater, take care not to let the heater directly contact the battery.

Charging time

Battery pack	Full charge (min.)	Normal charge (min.)
NP-FS11 (supplied)	180	130

Approximate time to charge a completely discharged battery pack using the AC-LS1A AC power adaptor.

Battery life and number of images that can be recorded/played back

STILL mode recording*

	NP-FS11 (supplied)	
	Battery life (min.)	Number of images
LCD screen ON	70 (65)	1300 (1200)
LCD screen OFF	90 (85)	1700 (1600)

STILL mode playback**

	NP-FS11 (supplied)	
	Battery life (min.)	Number of images
LCD screen ON	105 (100)	2000 (1900)

Approximate battery life and number of images that can be recorded/played back with a fully charged battery pack at a temperature of 77°F (25°C), 640×480 image size and in NORMAL recording mode. Numbers in parentheses indicate the time when you use a normally charged battery pack.

* Recording at about 4-second intervals
** Playing back single images in order at about 3-second intervals

MOVIE mode recording

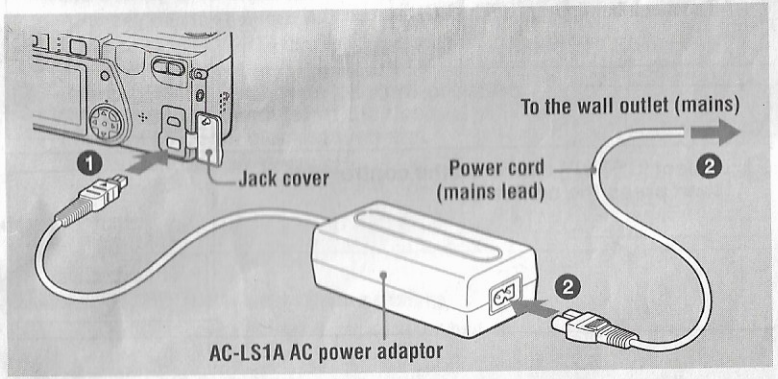
	NP-FS11 (supplied)	
	LCD screen OFF (min.)	LCD screen ON (min.)
Continuous recording	110 (100)	85 (75)

Approximate time that can be recorded with a fully charged battery pack at a temperature of 77°F (25°C) and 160×112 image size. Numbers in parentheses indicate the time when you use a normally charged battery pack.

Notes

- The battery life and number of images will be decreased if you use your camera at low temperatures, use the flash, repeatedly turn the power on/off or use the zoom.
- The capacity of the "Memory Stick" is limited. The figures in the table are a guide when you continuously record/play back while replacing the "Memory Stick."
- "----" appears in the display window until the battery usable time is calculated.
- During charging, the indicators in the display window may not appear correctly or may flash in the following cases.
  - — When the battery pack is not installed correctly.
  - — When the battery pack has malfunctioned.
- When you turn the LCD screen on and off, it takes about one minute for the correct battery remaining time to appear.
- If the power may go off although the battery remaining indicator indicates that the battery pack has enough power to operate, charge the battery pack fully again so that the indication on the battery remaining indicator is correct.
- Use the AC power adaptor near the wall outlet (mains). If any trouble occurs while using the camera, immediately unplug the power cord from the wall outlet (mains) to cut off the power.
- Do not short the DC plug of the AC power adaptor with a metallic object, as this may cause malfunction.
- Do not expose the battery pack to water.
- When the battery pack will not be used for a long time, charge the battery pack once fully, and use it in PLAY mode until it completely discharges. Keep the battery pack in a cool place.
- Battery life will be shorter when you record with the LCD screen ON. We recommend that you turn the LCD screen OFF.

Using the AC power adaptor

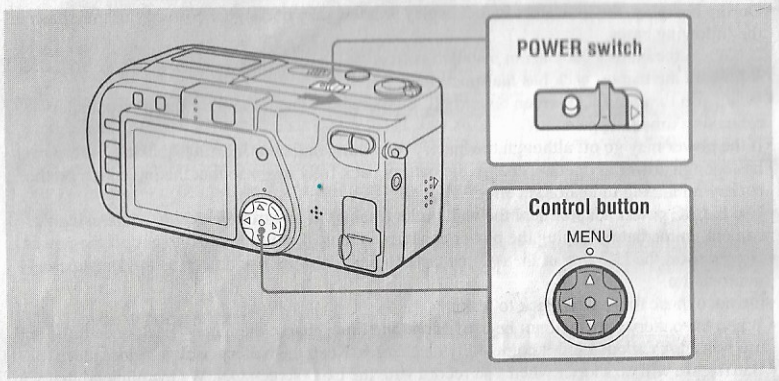


1 Open the jack cover and connect the DC connecting cable to the DC IN jack of your camera with the ▲ mark facing up.

2 Connect the power cord (mains lead) to the AC power adaptor and then to a wall outlet (mains).

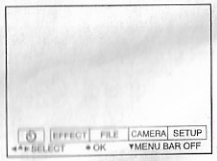
Setting the date and time

When you first use your camera, set the date and time. If these are not set, the CLOCK SET screen appears whenever you turn on your camera for recording.

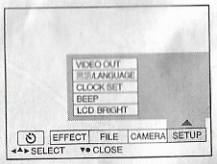


1 Slide the POWER switch to turn on the power.
The POWER lamp lights up.

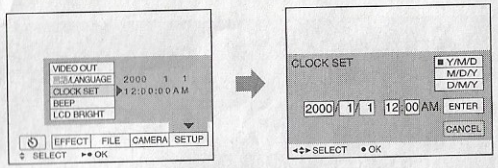
2 Press ▲ on the control button.
The menu bar appears on the LCD screen.



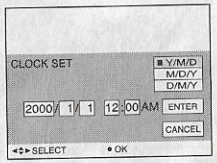
3 Select [SETUP] with ▶ on the control button, then press the center ●.



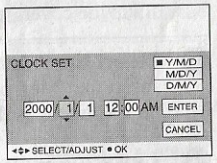
4 Select [CLOCK SET] with ▲/▼ on the control button, then press the center ●.



5 Select the desired date display format with ▲/▼ on the control button, then press the center ●.
Select from [Y/M/D] (year/month/day), [M/D/Y] (month/day/year) or [D/M/Y] (day/month/year).

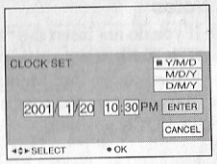


6 Select the year, month, day, hour or minute item you want to set with ◀/▶ on the control button.
The item to be set is indicated with ▲/▼.



7 Set the numeric value with ▲/▼ on the control button, then press the center ● to enter it.
After entering the number, ▲/▼ moves to the next item.
If you selected [D/M/Y] in step 5, set the time on a 24-hour cycle.

8 Select [ENTER] with ▶ on the control button, then press the center ● at the desired moment to begin clock movement.
The date and time are entered.



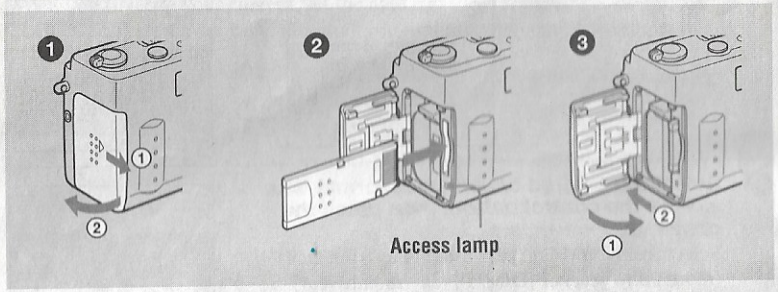
To cancel the date and time setting

Select [CANCEL] with ▲/▼/◀/▶ on the control button, then press the center ●.

Auto power-off function

If you do not operate the camera for about three minutes during recording, the camera turns off automatically to prevent wearing down the battery. To use the camera again, slide the POWER switch to turn on the camera again.

Inserting the "Memory Stick"



1 Open the battery/"Memory Stick" cover.
Slide the cover in the direction of the arrow.

2 Insert the "Memory Stick."
Insert the "Memory Stick" with the ▶ mark facing toward the battery compartment as illustrated until it clicks.

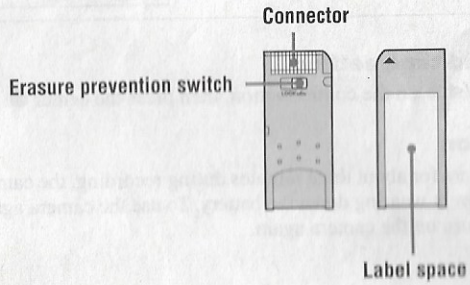
3 Close the battery/"Memory Stick" cover.

Removing the "Memory Stick"

Open the battery/"Memory Stick" cover, then press the "Memory Stick" once lightly.

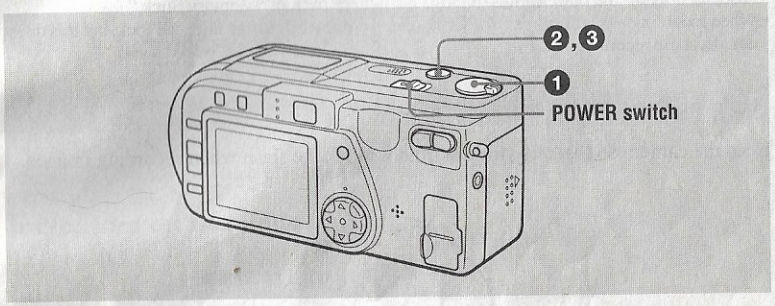
Notes

- If you do not insert the "Memory Stick" firmly until it clicks, a message such as "MEMORY STICK ERROR" will be displayed.
- Never remove the "Memory Stick" or turn off the power while the access lamp is lit up.
- You cannot record or edit images on a "Memory Stick" if the erasure prevention switch is set to the LOCK position.



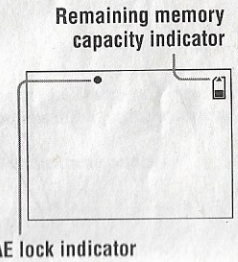
Recording still images

Still images are recorded in JPEG format.
To record still images, slide the POWER switch to turn on the power and insert a "Memory Stick."



1 Set the MODE selector to STILL.

2 Press and hold the shutter button halfway down and check the image.
While the AE lock indicator ● (green) is flashing rapidly, the image freezes momentarily, but is not yet recorded. When the camera finishes the automatic adjustments*, the AE lock indicator ● stops flashing rapidly and lights up.**
The camera is ready for recording.
To cancel the recording, release the shutter button.



3 Press the shutter button fully down.
The shutter sounds and the image is recorded on the "Memory Stick."
When "RECORDING" disappears, you can record the next image.

* Exposure and focus are automatically adjusted.

** When the AE lock indicator ● changes to flashing slowly, the subject may be difficult to focus on (dark or no contrast) or the subject may be extremely close. Release the shutter and focus again, and be sure to check the picture after recording.

If you skip step 2 and press the shutter fully down

The shutter sounds and the image is recorded on the "Memory Stick".
You cannot record an image when:
— The recording conditions require a flash and the strobe charge lamp (page 17) is flashing.

The number of images you can record on a "Memory Stick"

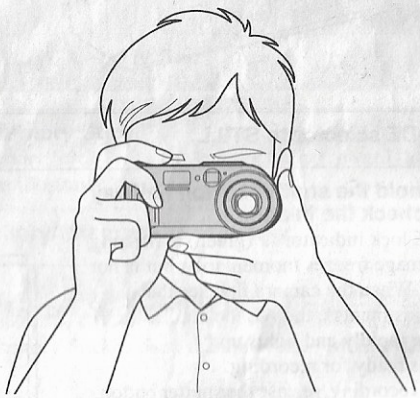
See pages 39 to 42.

Notes

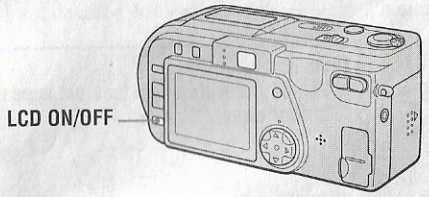
- Do not touch the lens portion while it is operating.
- While the image is being recorded on the "Memory Stick," do not shake or strike the camera. Also, do not turn the power off, or remove the battery pack or "Memory Stick."
- When recording a bright subject, the LCD screen color may change after AE lock, but this does not affect the recorded image.

Holding the camera correctly

Hold the camera so that your fingers do not block the flash when recording images.

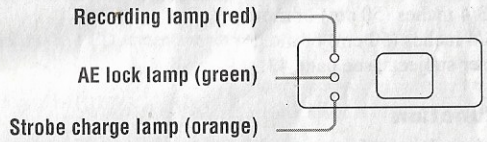


Recording images with the finder



Press LCD ON/OFF to turn off the LCD screen.

Indicators on the finder



Notes

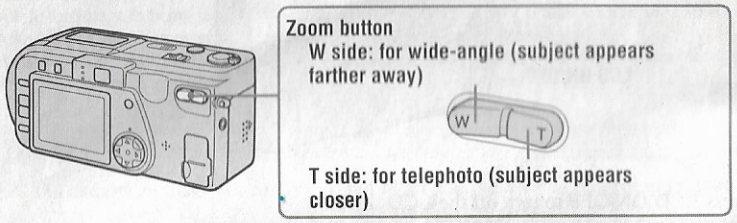
- When recording a subject closer than 3 1/4 feet (1 m), record using the LCD screen. When recording images with the finder, the positions of the finder and the lens differ, so the recording range may be slightly offset.
- You cannot turn off the LCD screen when [DEMO] is set to [ON] in the menu settings.

Checking the last recorded image (Quick Review)

You can check the last recorded image by clearing the menu bar from the screen (page 33) and pressing ◄ on the control button. To return to the normal recording mode, press lightly on the shutter button or select [RETURN] with ◄/► on the control button and then press the center ●. You can also delete the image first by selecting [DELETE] on the Quick Review screen with ◄/► on the control button and pressing the center ●, and then selecting [OK] with ▲/▼ on the control button and pressing the center ●.

Using the zoom feature

The lens portion moves during zoom operation. Be careful not to touch the lens portion while it is operating.

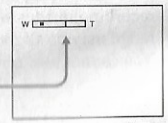


Minimum focal distance to the subject

W side: About 19 3/4 inches (50 cm) or more
T side: About 19 3/4 inches (50 cm) or more
To record even closer subjects, see page 43.

Digital zoom function

This camera has a digital zoom function.
Digital zoom enlarges the image by digital processing and it starts to function when zoom exceeds 3×.



Using digital zoom

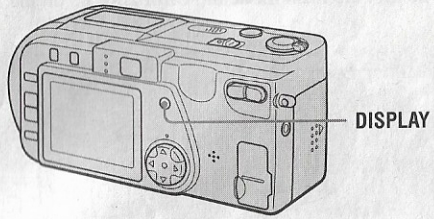
- The maximum zoom magnification is 6×.
- Digital zooming deteriorates the picture quality. When digital zoom is not necessary, set [DIGITAL ZOOM] to [OFF] in the menu settings (page 37).

Notes

- Zoom does not work while recording moving images.
- Digital zoom does not work for moving images.
- Digitally zoomed images do not appear in the finder. Check these images using the LCD screen.

LCD screen indicators during recording

Press DISPLAY to turn on/off the indicators on the LCD screen.
See page 67 for a detailed description of the indicated items.

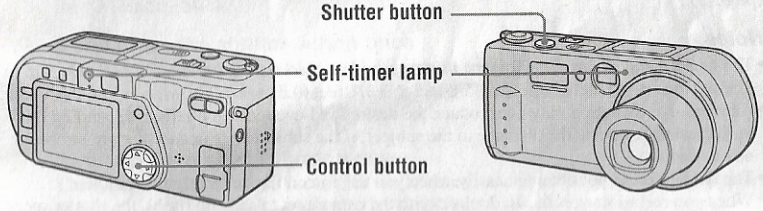


Notes

- You cannot turn off the self-timer indicators and some of the indicators used in advanced operations.
- The indicators on the LCD screen are not recorded.

Using the self-timer

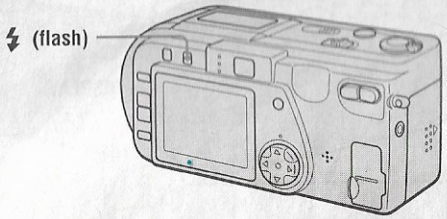
When you use the self-timer function, the subject is recorded about 10 seconds after you press the shutter button.



Select (self-timer) indicator on the menu bar with ▲/▼/◀/▶ on the control button, then press the center ●. The (self-timer) indicator appears on the LCD screen, and about 10 seconds after you press the shutter button, the subject is recorded. The self-timer lamp flashes after you press the shutter button until the shutter is released.

Recording images with the flash

The initial setting is auto (no indicator). In this mode, the flash automatically strobes when the surroundings become dark. When you change the flash mode, press the ϟ (flash) repeatedly so that the flash mode indicator appears on the LCD screen.



Each time you press the ϟ (flash), the indicator changes as follows.

(No indicator) → ◑ → ϟ → ⊘ → (No indicator)

◑ Auto red-eye reduction: The flash strobes before recording to reduce the red-eye phenomenon.

ϟ Forced flash: The flash strobes regardless of the surrounding brightness.

⊘ No flash: The flash does not strobe.

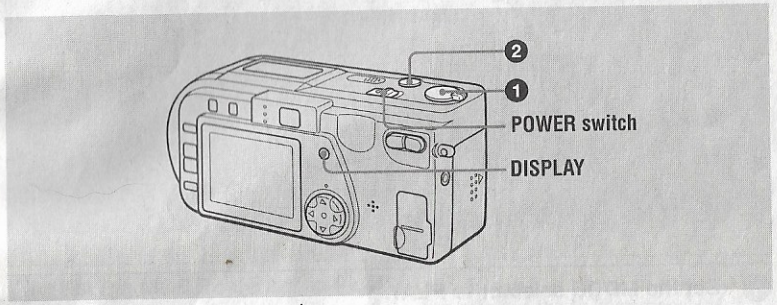
You can change the brightness of the flash (FLASH LEVEL) in the menu settings (page 37).

Notes

- The recommended shooting distance using the built-in flash is 1 5/8 feet to 7 1/2 feet (0.5 m to 2.3 m) when set to the W side, or 1 5/8 feet to 3 7/8 feet (0.5 m to 1.2 m) when set to the T side.
- Auto red-eye reduction may not produce the desired red-eye reduction effects depending on individual differences, the distance to the subject, if the subject does not see the pre-strobe, or other conditions.
- The flash effect is not obtained easily when you use forced flash in a bright location.
- When you record images in a dark place with the camera set to ⊘ (no flash), the shutter speed becomes slow, so using a tripod is recommended to prevent shaking.

Recording moving images

Moving images with audio are recorded in MPEG format.
To record moving images, slide the POWER switch to turn on the power and insert a "Memory Stick."



1 Set the MODE selector to MOVIE.

2 Press the shutter button fully down.
"REC" appears on the LCD screen, and the image and sound are recorded on the "Memory Stick."

If you press the shutter button once
The image and sound are recorded for five seconds. You can change the recording time to 10 or 15 seconds with [REC TIME SET] in the menu settings (page 36).

If you hold the shutter button down
The image and sound are recorded while the shutter button is held down for up to 60 seconds. However, when [IMAGE SIZE] in the menu setting is set to [320 (HQ)]/[320×240], the maximum recording time is 15 seconds (page 36).

Zooming or using the self-timer, etc.

See pages 18 and 19.

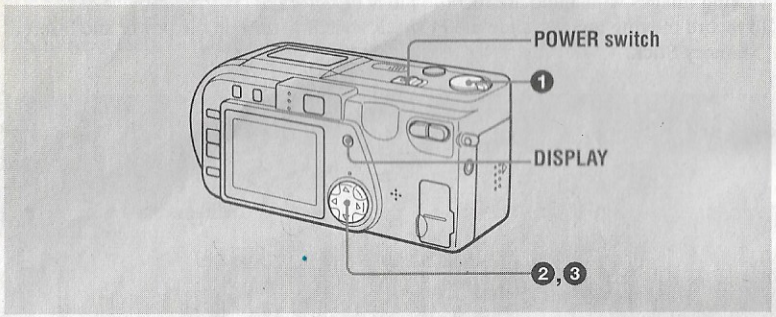
LCD screen indicators during recording

Press DISPLAY to turn on/off the indicators on the LCD screen.
These indicators are not recorded. See page 67 for a detailed description of the indicators.

Note

When shooting back-lit or other extremely bright scenes, vertical red bands may appear in the image. This is the smear phenomenon inherent to CCD image sensors, and is not a malfunction. The red bands can be reduced by compensating the exposure to the + side (page 44).

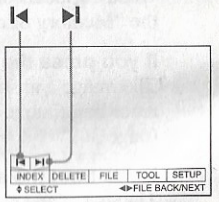
Playing back still images



1 Set the MODE selector to PLAY.
The last recorded image (still or moving) appears on the LCD screen.

2 Press ▲ on the control button to display the menu bar on the LCD screen.

3 Select the desired still image with the control button.
Press ▲/▼/◀/▶ on the control button to select ⏮/⏭ on the LCD screen, then press ◀/▶ on the control button.
⏮: To display the preceding image.
⏭: To display the next image.



When the menu bar is not displayed

You can directly select and play back the image with ◀/▶ on the control button.

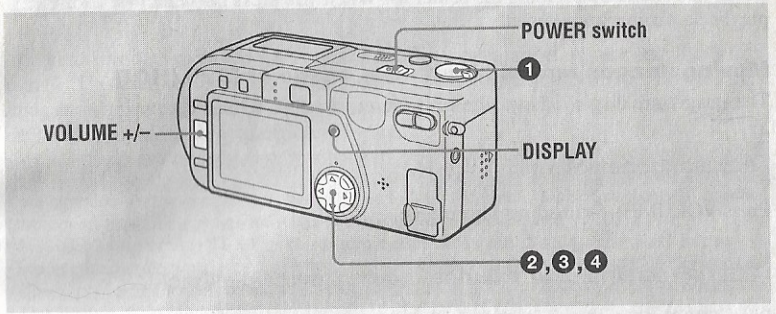
Notes

- You might not be able to correctly play back images recorded with this camera on other equipment.
- You cannot play back on this camera images larger than the maximum image size that can be recorded with this camera.

LCD screen indicators during still image playback

Press DISPLAY to turn on/off the indicators on the LCD screen.
See page 68 for a detailed description of the indicators.

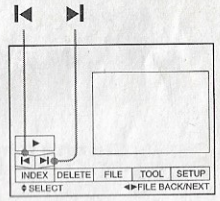
Playing back moving images



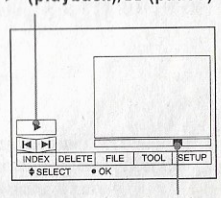
1 Set the MODE selector to PLAY.
The last recorded image (still or moving) appears on the LCD screen.

2 Press ▲ on the control button to display the menu bar on the LCD screen.

3 Select the desired moving image with the control button.
Moving images are displayed one-size smaller than still images.
Press ▲/▼/◀/▶ on the control button to select ⏮/⏭ on the LCD screen, then press ◀/▶ on the control button.
⏮: To display the preceding image.
⏭: To display the next image.



4 Select ▶ (playback) on the LCD screen with ▲/▼/◀/▶ on the control button, then press the center ●.
The moving image and sound are played back.
During playback, ▶ (playback) changes to ❚❚ (pause).



To pause playback

Select ❚❚ (pause) on the LCD screen with ▲/▼/◀/▶ on the control button, then press the center ●.

When the menu bar is not displayed

You can directly select the image with ◀/▶ on the control button, and play back the image and sound by pressing the center ●. When you press the center ● during playback, playback is paused.

Moving images recorded with the image of [320 (HQ)]

The images are displayed over the entire screen in steps ❸ and ❹.

Adjusting the volume

Press VOLUME +/– to adjust the volume.

LCD screen indicators during moving image playback

Press DISPLAY to turn on/off the indicators on the LCD screen.
See page 68 for a detailed description of the indicators.

Viewing images using a personal computer

You can view data recorded with your camera on a personal computer and attach it to e-mail. This section describes the method for installing the USB driver and viewing images on a personal computer. Be sure to also see the operation manuals for your personal computer and application software.

Note

Data recorded with your camera is stored in the following formats. Make sure that applications that support these file formats are installed on your personal computer.

- Still images (other than TEXT mode, uncompressed mode and Clip Motion): JPEG format
- Moving images/audio: MPEG format
- Uncompressed mode still images: TIFF format
- TEXT mode, Clip Motion: GIF format

Recommended computer environment

Recommended Windows environment

OS: Microsoft Windows 98, Windows 98SE, Windows 2000 Professional
Standard installation is required.
Operation is not assured in an environment upgraded from:
Windows 3.1, Windows 95 to Windows 98 or
Windows 98 to Windows 98SE;
Windows NT 3.51, Windows NT 4.0, Windows 98, Windows 98SE, Windows 95 to Windows 2000
CPU: MMX Pentium 200 MHz or faster
The USB connector must be provided as standard.
ActiveMovie Player (DirectShow) must be installed (to play back moving pictures).

Recommended Macintosh environment

Macintosh computer with the Mac OS 8.5.1/8.6/9.0 standard installation
However, note that the update to Mac OS 9.0 should be used for the following models.

- iMac with the Mac OS 8.6 standard installation and a slot loading type CD-ROM drive
- iBook or G4 with the Mac OS 8.6 standard installation

The USB connector must be provided as standard.
QuickTime 3.2 or newer must be installed (to play back moving pictures).

Notes

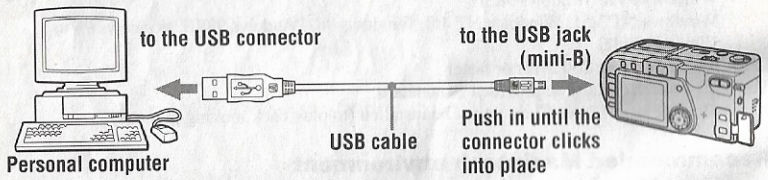
- Operations are not guaranteed for either the Windows or Macintosh environment if you connect two or more USB equipment to a single personal computer at the same time (except for the USB keyboard and mouse which are provided as standard), or when using a hub.
- Depending on the type of USB equipment that is used simultaneously, some equipment may not operate.
- Operations are not guaranteed for all the recommended computer environments mentioned above.

Installing the USB driver

Before connecting your camera to your personal computer, install the USB driver to the computer. The USB driver is contained together with application software for viewing images on a CD-ROM which is supplied with your camera.

For Windows 98, Windows 98SE and Windows 2000 users

1. **Turn on your personal computer and allow Windows to load.**
   Do not connect the USB cable to your personal computer yet.
2. **Insert the supplied CD-ROM in the CD-ROM drive of your personal computer.**
   The application software screen appears.
3. **Click "USB Driver Installation for Windows 98/98SE, Windows 2000".**
   USB driver installation starts.
4. **Follow the on-screen messages to install the USB driver.**
   Some personal computers may restart at this point.
5. **Connect the USB jack (mini-B) on your camera with the USB connector on your personal computer using the supplied USB cable.**



6. **Insert a "Memory Stick" into your camera, connect the AC power adaptor and turn on your camera.**
   "PC MODE" appears on the LCD screen of your camera and the camera is set to communication standby mode. Your personal computer recognizes the camera, and the Windows Add Hardware Wizard starts.
7. **Follow the on-screen messages to have the Add Hardware Wizard recognize the hardware.**
   The Add Hardware Wizard starts twice because two different USB drivers are installed. Be sure to allow the installation to complete without interrupting it.

Notes

- Be sure to perform the procedure up to step 4 in the condition without the camera connected to your personal computer.
- In step 7, make sure that a "Memory Stick" is inserted in your camera. Otherwise, you will be unable to install the USB driver.

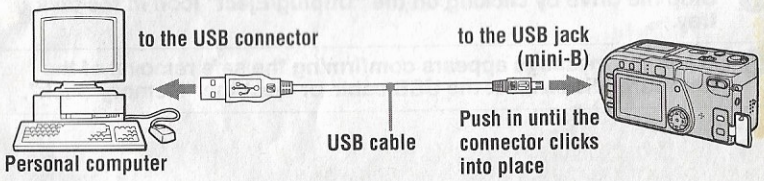
For Macintosh users

1. **Turn on your personal computer and allow the Mac OS to load.**
2. **Insert the supplied CD-ROM in the CD-ROM drive of your personal computer.**
3. **Double-click the CD-ROM drive icon to open the window.**
4. **Double-click the icon of the hard disk containing the OS to open the window.**
5. **Move the following two files from the window opened in step ❸ to the "System Folder" icon in the window opened in step ❹ (drag and drop).**
   - Sony USB Driver
   - Sony USB Shim
6. **When "Put these items into the Extensions folder?" appears, click "OK."**
7. **Restart your personal computer.**

Viewing images

For Windows 98, Windows 98SE and Windows 2000 users

1. **Turn on the power of your personal computer and allow Windows to load.**
2. **Connect one end of the USB cable to the USB jack (mini-B) on the camera and the other end to the USB connector on your personal computer.**



3. **Insert a "Memory Stick" into your camera, and connect the AC power adaptor to your camera and then to a wall outlet (mains).**

11 See page 29

4 **Turn on the power of your camera.**
"PC MODE" appears on the LCD screen of the camera.

5 **Open "My Computer" on Windows and double click the newly recognized drive. (Example: "Removable Disk (D:)")**
The folders inside the "Memory Stick" are displayed.

6 **Select and double-click the desired image/sound file from the folder.**
For the detailed folder and file name, see "Image file storage destinations and image files" (page 30).

Desired file type	Double-click in this order
Still image	"Dcim" folder → "100msdcf" folder → Image file
Moving image*	"Mssony" folder → "Moml0001" folder → Image file*
Audio*	"Mssony" folder → "Momlv100" folder → Audio file*
Clip Motion image	"Dcim" folder → "100msdcf" folder → Image file
E-mail image TIFF image (uncompressed)	"Mssony" folder → "Imcif100" folder → Image file

* Copying a file to the hard disk of your personal computer before viewing it is recommended. If you play back the file directly from the "Memory Stick", the image and sound may break off.

For Windows 2000 users

When using Windows 2000, the following procedures are recommended when disconnecting the USB cable from your personal computer or ejecting the "Memory Stick" from the camera while it is connected to your personal computer.

1 **Stop the drive by clicking on the "Unplug/Eject" icon in the task tray.**

2 **When the message appears comfirming the safe removal of the hardware, disconnect the USB cable or eject the "Memory Stick".**

Notes on using your personal computer

"Memory Stick"

- "Memory Stick" operations on your camera cannot be assured if the "Memory Stick" has been formatted on your personal computer.
- Do not optimize the "Memory Stick" on a Windows machine. This will shorten the "Memory Stick" life.
- Do not compress the data on the "Memory Stick." Compressed files cannot be played back on your camera.

Software

- Depending on your application software, the file size may increase when you open a still image file.
- When you load an image modified using the supplied retouch software from your personal computer to the camera or when you directly modify the image on the camera, the image format will differ so the "FILE ERROR" message may appear and you may be unable to open the file.
- Depending on your application software, only the first frame of a Clip Motion image may be displayed.

Communications with your personal computer

Communications between your camera and your personal computer may not recover after recovering from Suspend, Resume, or Sleep.

Other

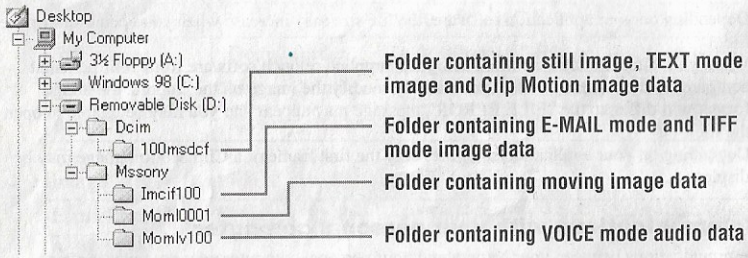
When connecting the camera to a personal computer or when using an external power source, remove the battery pack from inside the camera.

- Windows and ActiveMovie, DirectShow are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Macintosh and Mac OS, QuickTime are trademarks of Apple Computer, Inc.
- All other product names mentioned herein may be the trademarks or registered trademarks of their respective companies. Furthermore, "™" and "®" are not mentioned in each case in this manual.

Image file storage destinations and image files

Image files recorded with your camera are grouped in folders by recording mode. The meanings of the file names are as follows. □□□□ stands for any number within the range from 0001 to 9999.

For Windows 98 users (The drive recognizing the camera is "D.")



Folder	File	Meaning
100msdcf	DSC0□□□□.JPG	• Still image file recorded normally • Still image file recorded in E-MAIL mode (page 41) • Still image file recorded in TIFF mode (page 42) • Still image file recorded in VOICE mode (page 41)
	CLP0□□□□.GIF	• Clip Motion file recorded in NORMAL mode (page 40)
	CLP0□□□□.THM	• Index image file of Clip Motion file recorded in NORMAL mode
	MBL0□□□□.GIF	• Clip Motion file recorded in MOBILE mode (page 40)
	MBL0□□□□.THM	• Index image file of Clip Motion file recorded in MOBILE mode
	TXT0□□□□.GIF	• Still image file recorded in TEXT mode (page 42)
	TXT0□□□□.THM	• Index image file of still image file recorded in TEXT mode

Folder	File	Meaning
Imcif100	DSC0□□□□.JPG	• Small-size image file recorded in E-MAIL mode (page 41)
	DSC0□□□□.TIF	• Uncompressed image file recorded in TIFF mode (page 42)
Moml0001	MOV0□□□□.MPG	• Moving image file recorded normally
Momlv100	DSC0□□□□.MPG	• Audio file recorded in VOICE mode (page 41)

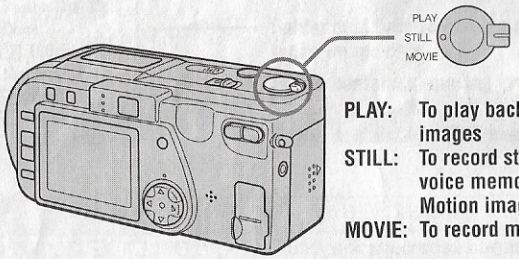
The numerical portions of the following files are the same.
— A small-size image file recorded in E-MAIL mode and its corresponding image file
— An uncompressed image file recorded in TIFF mode and its corresponding image file
— An audio file recorded in VOICE mode and its corresponding image file
— An image file recorded in TEXT mode and its corresponding index image file
— An image file recorded with CLIP MOTION and its corresponding index image file

Before performing advanced operations

This section describes the basic control methods that are frequently used for "Advanced operations".

How to use the MODE selector

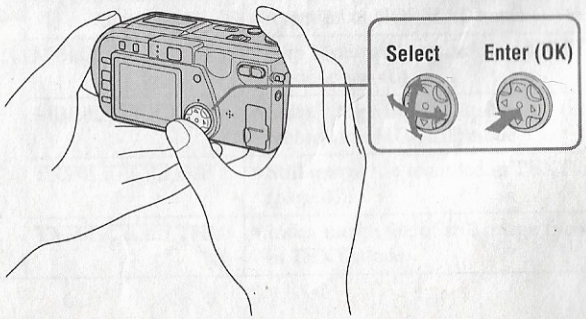
The MODE selector selects whether you can use your camera to record or to play back and edit images. Set the selector as follows before starting to operate your camera.



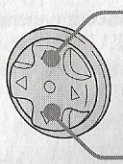
PLAY: To play back or edit images
STILL: To record still images, voice memos and Clip Motion images
MOVIE: To record moving images

How to use the control button

The control button is used to select the indicators, images and menus appearing on the LCD screen of your camera. The operation methods that are frequently used for "Advanced operations" are described below.

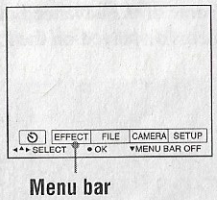


Turning on/off the operation buttons (menu bar) on the LCD screen



Press ▲ to display the menu bar on the LCD screen.

Press ▼ to clear the menu bar from the LCD screen.



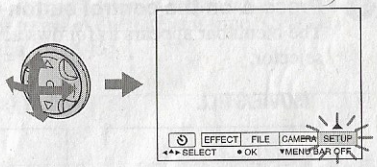
Menu bar

Note

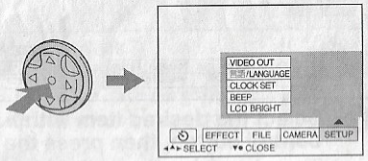
You cannot clear the menu bar during INDEX screen display (page 47).

Selecting items and images on the LCD screen

❶ **Press ▲/▼/◀/▶ on the control button to select the item you want to set or the image you want to display.**
The color of the selected item or the border of the selected image changes from blue to yellow.



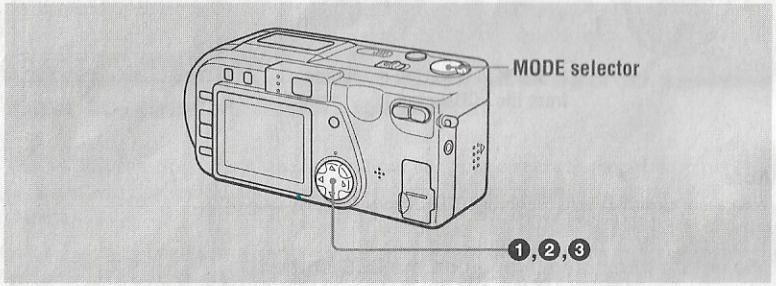
❷ **Press the center ● to enter the item.**
Repeat steps ❶ and ❷ to execute each function.



The "Advanced operations" section of this manual refers to selecting and entering items by the above procedure as "Select [(item name)]."

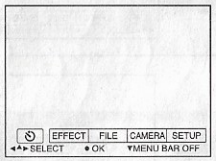
How to change the menu settings

Some of the advanced operations for your camera are executed by selecting menu items displayed on the LCD screen with the control button.

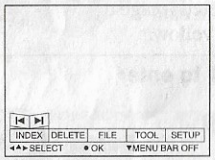


❶ Press ▲ on the control button to display the menu bar.
The menu bar appears as follows according to the setting of the MODE selector.

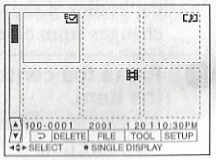
MOVIE/STILL



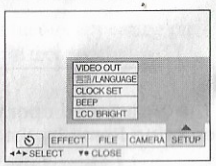
PLAY (single mode)



PLAY (INDEX mode)



❷ Select the desired item with ▲/▼/◄/► on the control button, then press the center ●.
The color of the selected item changes from blue to yellow, and when you press the center ●, the modes that can be set for that item are displayed.



❸ Select the desired mode with ▲/▼/◄/► on the control button, then press the center ●.

To clear the menu

Press ▼ on the control button until the LCD screen returns to the menu bar display in step ❶. To clear the menu bar, press ▼ again.

Menu settings

Menu items that can be modified differ depending on the setting of the MODE selector. The LCD screen shows only the items you can operate at the moment. Initial settings are indicated with ■.

(SELF TIMER)

Records with the self-timer (page 19).

EFFECT

Item	Setting	Description	MODE selector
P.EFFECT	SOLARIZE B&W SEPIA NEG.ART ■ OFF	Sets the image special effects (page 46).	MOVIE STILL
DATE/ TIME	DAY&TIME DATE ■ OFF	Sets whether to insert the date and time into the image (page 45).	STILL

FILE

Item	Setting	Description	MODE selector
FORMAT	OK	Formats a "Memory Stick." Note that when formatting is performed, all data recorded on the "Memory Stick" including protected images is erased.	MOVIE STILL PLAY
	CANCEL	Cancels formatting of a "Memory Stick."	
FILE NUMBER	SERIES	Assigns numbers to files in sequence even if the "Memory Stick" is changed.	MOVIE STILL
	■ NORMAL	Resets the file numbering each time the "Memory Stick" is changed.	
CLIP MOTION		Sets the image size and number of frames for creating GIF format animation (page 40).	STILL
	160×120 (NORMAL)	Up to 10 frames can be recorded.	
	80×72 (MOBILE)	Up to 2 frames can be recorded.	
	CANCEL	Cancels Clip Motion.	

Item	Setting	Description	MODE selector
IMAGE SIZE	■2048×1536 2048 (3:2) 1600×1200 1280×960 640×480	Selects the image size when recording still images.	STILL
	320 (HQ) 320×240 ■160×112	Selects the MPEG image size when recording moving images.	MOVIE
REC MODE	TIFF	Records a TIFF (uncompressed) file in addition to the JPEG file.	STILL
	TEXT	Records a GIF file in black-and-white.	
	VOICE	Records an audio file (with still image) in addition to the JPEG file.	
	E-MAIL	Records a small-size (320×240) JPEG file in addition to the selected image size.	
	■NORMAL	Records a JPEG file in the selected image size.	
REC TIME SET	15 sec 10 sec ■5 sec	Adjusts the recording time for moving images.	MOVIE
ROTATE (in single mode only)	—	Rotates the still image.	PLAY
SLIDE SHOW (in single mode only)	INTERVAL	Sets the slide show interval. ■3 sec/5 sec/10 sec/30 sec/1 min	PLAY
	REPEAT	Repeats the slide show. ■ON/OFF	
	START	Starts the slide show.	
	CANCEL	Cancels the slide show settings and execution.	
PRINT MARK	ON	Marks the still images to be printed (page 55).	PLAY
	■OFF	Unmarks the print mark of the still images.	
PROTECT	ON	Protects images against accidental erasure (page 51).	PLAY
	■OFF	Releases protection of images against accidental erasure.	

CAMERA

Item	Setting	Description	MODE selector
DIGITAL ZOOM	■ON	Uses digital zoom.	STILL
	OFF	Does not use digital zoom.	
SHARPNESS	+2 to –2	Adjusts the sharpness of the image. [F] appears on the LCD screen except when set to 0.	STILL
WHITE BALANCE	IN DOOR OUT DOOR HOLD ■AUTO	Sets the white balance (page 45).	MOVIE STILL
FLASH LEVEL	HIGH	Makes the flash level higher than normal.	STILL
	■NORMAL	Normal setting.	
	LOW	Makes the flash level lower than normal.	
EXPOSURE	+2.0 EV to –2.0 EV	Adjusts the exposure.	MOVIE STILL

TOOL

Item	Setting	Description	MODE selector
COPY	OK	Copies an image (page 53).	PLAY
	CANCEL	Cancels copying of the image.	
RESIZE (in single mode only)	2048×1536 1600×1200 1280×960 640×480 CANCEL	Changes the recorded still image size (page 53).	PLAY

SETUP

Item	Setting	Description	MODE selector
DEMO	■ON/STBY OFF	Displayed only when you use the AC power adaptor in MOVIE or STILL mode. When ON is selected, a demonstration will start if you do not operate your camera for about 10 minutes. To stop the demonstration, turn off your camera. Select ON to make the demonstration appear again.	MOVIE STILL

Item	Setting	Description	MODE selector
VIDEO OUT	NTSC	Sets the video output signal to NTSC mode (North American countries, Japan, etc.).	MOVIE STILL PLAY
	PAL	Sets the video output signal to PAL mode (European countries, etc.).	
言語/ LANGUAGE	■ ENGLISH	Displays the menu items in English.	MOVIE STILL PLAY
	日本語/JPN	Displays the menu items in Japanese.	
CLOCK SET	—	Sets the date and time (page 12).	MOVIE STILL PLAY
BEEP	SHUTTER	Turns off the beep only. (The shutter sound is heard when you press the shutter button.)	MOVIE STILL PLAY
	■ ON	Turns on the beep/shutter sound (when you press the control button/shutter button).	
	OFF	Turns off the beep/shutter sound.	
LCD BRIGHT	▮▮▮▮▮▯▯▯▯	Adjusts the LCD screen brightness using the +/– buttons on the LCD screen. This has no effect on the recorded images.	MOVIE STILL PLAY

INDEX*

Displays six images at a time (PLAY (INDEX) mode) (page 47).

DELETE

Setting	Description	MODE selector
OK	Deletes the displayed image.	PLAY
CANCEL	Cancels deleting of the image.	

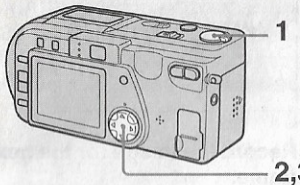
⮌ (RETURN)**

Returns to PLAY (single) mode.

* Displayed only in PLAY (single) mode.

** Displayed only in PLAY (INDEX) mode.

Setting the image size (IMAGE SIZE)



1 Set the MODE selector to MOVIE or STILL.

2 Select [FILE] and then [IMAGE SIZE] from the menu.

3 Select the desired image size.

Still image sizes

2048×1536, 2048 (3:2)*, 1600×1200, 1280×960, 640×480

* The image is recorded in 3:2 (horizontal : vertical) size to match the printing paper size ratio of 3:2.

Moving image sizes

320 (HQ*), 320×240, 160×112

* High Quality mode

The number of images or the time that you can record on a "Memory Stick" (8 MB):

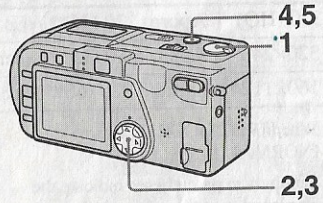
Image size	Number of images or time*
2048×1536	Approx. 5
2048 (3:2)	Approx. 5
1600×1200	Approx. 8
1280×960	Approx. 12
640×480	Approx. 118
320 (HQ)	Approx. 20 (15**) sec.
320×240	Approx. 80 (15**) sec.
160×112	Approx. 320 (60**) sec.

* When [REC MODE] is set to [NORMAL].

** Numbers in parentheses indicate the maximum recording time during continuous recording.

Creating Clip Motion Files

Clip Motion is an animation function that plays back still images in succession. Clip Motion images are played back on this camera at approximately 0.5 s intervals. The images are stored in GIF format, which is convenient for creating home pages or attaching images to e-mail.



1 Set the MODE selector to STILL.

2 Select [FILE] and then [CLIP MOTION] from the menu.

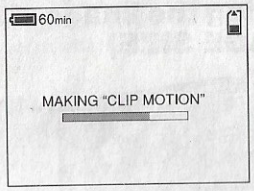
3 Select the desired mode.

160×120 (NORMAL)
Clip Motion of up to 10 frames can be recorded.
This is suitable for use on home pages, etc.

80×72 (MOBILE)
Clip Motion of up to 2 frames can be recorded.
This is suitable for use with portable data terminals.

CANCEL
This cancels the creation of Clip Motion.

4 Record the image for the first frame.



5 Record the image for the next frame.
Image recording can be repeated up to the maximum number of recordable frames.
The frame images are automatically recorded on the "Memory Stick" when you select [FINISH] or after recording the maximum number of frames.

To stop Clip Motion creation

Select [RETURN] after step **3**.
Note that if you record even one frame, you cannot stop Clip Motion creation.

The number of Clip Motion frames that you can record on a "Memory Stick" (8 MB):

Image size	Number of images
160×120 (NORMAL)	Approx. 40*
80×72 (MOBILE)	Approx. 800

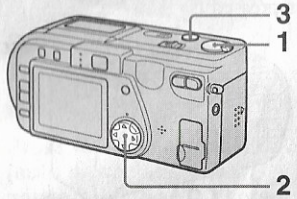
* When recording 10 frames per Clip Motion file

Notes

- Reading and writing data takes more time than normal image recording.
- Due to the limitations of the GIF format, the number of colors for Clip Motion images is reduced to 256 colors or less. Therefore, the picture quality may deteriorate for some images.
- The file size is reduced in MOBILE mode, so the picture quality deteriorates.
- GIF files not created on this camera may not be displayed correctly.

Recording still images for e-mail (E-MAIL)

E-MAIL mode records a small-size (320×240) image at the same time as a still image. Small-size images are convenient for e-mail transmission, etc.



1 Set the MODE selector to STILL.

2 Select [FILE], [REC MODE], and then [E-MAIL] from the menu.

3 Record the image.

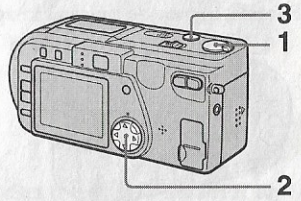
The number of images that you can record on a "Memory Stick" (8 MB) in E-MAIL mode:

Image size	Number of images
2048×1536	Approx. 4
2048 (3:2)	Approx. 4
1600×1200	Approx. 8
1280×960	Approx. 12
640×480	Approx. 95

To return to normal recording mode

Select [NORMAL] in step **2**.

Recording still images with audio files (VOICE)



1 Set the MODE selector to STILL.

2 Select [FILE], [REC MODE], and then [VOICE] from the menu.

3 Record the image.

If you press and release the shutter button, sound is recorded for 5 seconds.

If you hold down the shutter button, sound is recorded until you release the shutter button for up to 40 seconds.

The number of images that you can record on a "Memory Stick" (8 MB) in VOICE mode (when recording sound for five seconds):

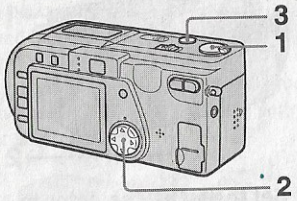
Image size	Number of images
2048×1536	Approx. 4
2048 (3:2)	Approx. 4
1600×1200	Approx. 7
1280×960	Approx. 11
640×480	Approx. 56

To return to normal recording mode

Select [NORMAL] in step **2**.

Recording text documents (TEXT)

Text is recorded in black and white GIF format to provide a clearer image.



1 Set the MODE selector to STILL.

2 Select [FILE], [REC MODE], and then [TEXT] from the menu.

3 Record the image.

The number of images that you can record on a "Memory Stick" (8 MB) in TEXT mode:

Image size	Number of images
2048×1536	Approx. 15 to 125
2048 (3:2)	Approx. 17 to 137
1600×1200	Approx. 25 to 173
1280×960	Approx. 40 to 228
640×480	Approx. 160 to 727

To return to normal recording mode

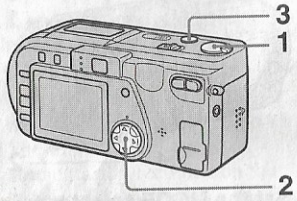
Select [NORMAL] in step **2**.

Notes

- If the subject is not evenly illuminated, you may be unable to record a clear image.
- Writing and reading data takes more time than in normal recording.

Recording still images as uncompressed files (TIFF)

This mode simultaneously records still images in both TIFF format (uncompressed) and JPEG format (compressed).



1 Set the MODE selector to STILL.

2 Select [FILE], [REC MODE], and then [TIFF] from the menu.

3 Record the image.

The number of images that you can record on a "Memory Stick" (16 MB) in TIFF mode:

Image size	Number of images
2048×1536	Approx. 1
2048 (3:2)	Approx. 1

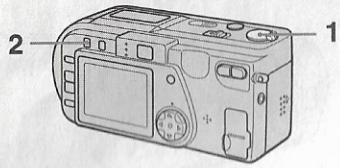
To return to normal recording mode

Select [NORMAL] in step **2**.

Notes

- JPEG images are recorded in the image size selected by the [IMAGE SIZE] menu. TIFF images are recorded in [2048×1536] size other than when [2048 (3:2)] is selected.
- Writing data takes more time than in normal recording.
- The supplied "Memory Stick" (8 MB) does not have sufficient capacity to record uncompressed images.

Recording images in macro



1 Set the MODE selector to MOVIE or STILL.

2 Press MACRO so that the (auto macro) indicator appears on the LCD screen.
You can record a subject as close as about 4 inches (10 cm) from the lens surface with the zoom set all the way to the W side.
(About 19 3/4 inches (50 cm) on the T side)

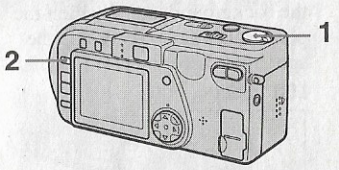
To return to normal recording mode

Press MACRO again so that disappears from the LCD screen.

Notes

- You cannot record images in macro with the following PROGRAM AE modes.
  - Landscape mode
  - Panfocus mode
- You cannot record images in macro when appears on the LCD screen.
- When recording images in macro, use the LCD screen. If you record using the finder, the range visible in the finder may differ from the actual recording range.

Using the PROGRAM AE function



1 Set the MODE selector to MOVIE or STILL.

2 Press PROGRAM AE repeatedly to select the desired PROGRAM AE mode.

Twilight mode
Suppresses the washed-out color of a bright subject in a dark place so that you can record the subject without losing the dark atmosphere of the surroundings.

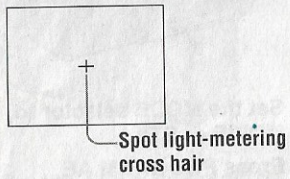
+ Twilight plus mode
Increases the effectiveness of the twilight mode function.

Landscape mode
Focuses only on a distant subject to record landscapes, etc.

Panfocus mode
Changes the focus quickly and simply from a close subject to a distant subject.

[●] Spot light-metering mode
Select this mode when there is backlight or when there is strong contrast between the subject and the background, etc. Position the point you want to record on the spot light-metering cross hair.

LCD screen



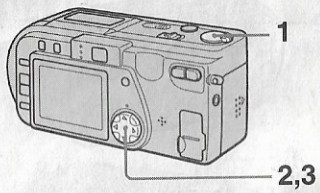
To cancel PROGRAM AE

Press PROGRAM AE repeatedly until the indicator on the LCD screen goes out.

Notes

- You can focus only on distant subjects in Landscape mode.
- In Panfocus mode, the zoom position and focus are fixed.
- When you record in the Twilight plus mode, we recommend that you use a tripod to prevent shaking.
- Set the forced flash ϟ when you use the flash in the following modes:
  –Twilight mode
  –Twilight plus mode
  –Landscape mode
- You cannot use the PROGRAM AE function when [REC MODE] is set to [TEXT].
- The noise may increase in twilight plus mode.

Adjusting the exposure (EXPOSURE)



1 Set the MODE selector to MOVIE or STILL.

2 Select [CAMERA] and then [EXPOSURE] from the menu.

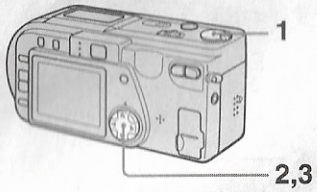
3 Select the desired exposure value.
Adjust the exposure value while checking the brightness of the background. You can select values ranging from +2.0 EV to –2.0 EV in steps of 1/3 EV.

Note

The exposure may not be adjusted properly when the subject is extremely bright or dark, or when using the flash.

Adjusting the white balance (WHITE BALANCE)

Normally the white balance is automatically adjusted.



1 Set the MODE selector to MOVIE or STILL.

2 Select [CAMERA] and then [WHITE BALANCE] from the menu.

3 Select the desired white balance setting.

IN DOOR (☼)
- Places where the lighting condition changes quickly
- Under bright lighting such as photography studios
- Under sodium or mercury lamps

OUT DOOR (☀)
Recording a sunrise/sunset, night scene, neon signs, or fireworks

HOLD
Holds the white balance adjusted status

AUTO (No indicator)
Adjusts the white balance automatically

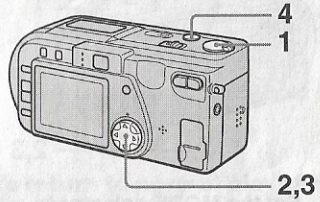
To reactivate auto adjustment

Select [AUTO] in step **3**.

Note

Select [AUTO] when recording under fluorescent lighting.

Recording the date and time on the still image (DATE/TIME)



1 Set the MODE selector to STILL.

2 Select [EFFECT] and then [DATE/TIME] from the menu.

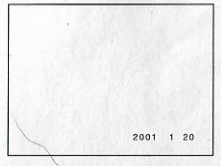
3 Select the date and time setting.

DAY&TIME
The date, hour and minutes are imposed onto the image.

DATE
The year, month and day are imposed onto the image.

OFF
The date and time are not imposed onto the image.

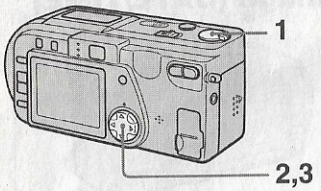
4 Record the image.
The date and time are not displayed during recording.
The date and time are displayed when playing back images.



Notes

- If you select [DATE] in step **3**, the date is imposed onto the image in the order selected with "Setting the date and time" (page 12).
- The date and time are not imposed onto Clip Motion images.

Enjoying picture effects (P.EFFECT)



1 Set the MODE selector to MOVIE or STILL.

2 Select [EFFECT] and then [P.EFFECT] from the menu.

3 Select the desired mode.

SOLARIZE
The light contrast is clearer and the picture looks like an illustration.

B&W
The picture is monochrome (black and white).

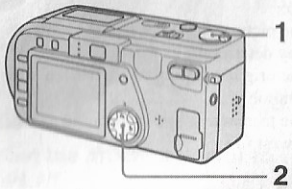
SEPIA
The picture is colored like an old picture.

NEG.ART
The color and brightness of the picture are reversed.

To cancel picture effect

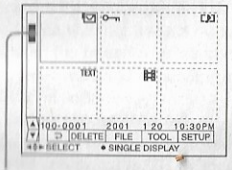
Select [OFF] in step **3**.

Playing back six images at once (INDEX)



1 Set the MODE selector to PLAY.

2 Select [INDEX] on the LCD screen.
Six images are displayed at once (index screen).
Only the first frame of Clip Motion files is displayed.



This shows the position of the currently displayed images relative to all the recorded images.

The following marks are displayed on each image according to the image type and settings.
: Moving image file
: Voice memo file
: E-mail file
: Print mark
: Protect mark
TEXT: Text file
TIFF: TIFF file
CLIP: Clip Motion file
(No mark): Normal recording (no settings)

To display the next (previous) index screen

Select ▲/▼ at the lower left of the LCD screen.

Displays the previous index screen

Displays the next index screen

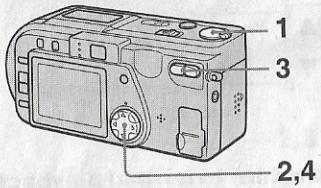
To return to normal playback (single image)

- Select the desired image with the control button.
- Select [⮌] (RETURN).

Note

When viewing an image recorded in Clip Motion or TEXT mode on the INDEX screen, the image may appear different from the actual image.

Enlarging a part of the still image (Zoom and trimming)



1 **Set the MODE selector to PLAY.**

2 **Display the image to be enlarged.**

3 **Zoom in/out the image with the zoom button.**
The zoom scaling indicator appears on the LCD screen.

4 **Press the control button repeatedly to select the desired part of the image.**
▲: The image moves downward
▼: The image moves upward
◀: The image moves rightward
▶: The image moves leftward

To return to the normal size

Zoom in with the zoom button until the zoom scaling indicator (Q ×1.1) disappears from the screen, or simply press ●.

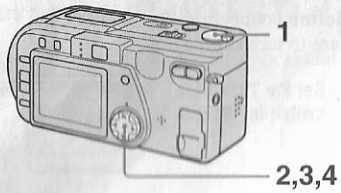
To record an enlarged image (trimming)

①Enlarge the image.
②Press the shutter button. The image is recorded at 640×480 size, then the display returns to the image display before enlargement.

Notes

- You cannot trim images recorded in TEXT mode or uncompressed images.
- You cannot zoom or trim Clip Motion images.
- The maximum zoom magnification is 5× the original image, regardless of the image size.
- The picture quality of trimmed images may deteriorate.
- The original picture remains even after trimming.
- The trimmed image is recorded as the newest file.

Rotating a still image (ROTATE)



1 **Set the MODE selector to PLAY.**

2 **Display the image to rotate.**

3 **Select [FILE] and then [ROTATE] from the menu.**

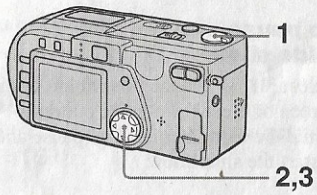
4 **Rotate the image clockwise ↷ or counterclockwise ↶, then select [RETURN].**

Notes

- You may not be able to rotate images recorded with other equipment.
- Also, when viewing images on a personal computer, the image rotation information may not be reflected depending on the application software.
- You cannot rotate protected or uncompressed images, Clip Motion images or images recorded in TEXT mode.

Playing back the images in order (SLIDE SHOW)

This function is useful for checking the recorded images or for presentations, etc.



1 **Set the MODE selector to PLAY.**

2 **Select [FILE] and then [SLIDE SHOW] from the menu.**
Set the following items.

INTERVAL
1 min (one minute), 30 sec (30 seconds), 10 sec (10 seconds), 5 sec (5 seconds), 3 sec (3 seconds)

REPEAT
ON: Plays back images in a continuous loop until [RETURN] is selected.
OFF: After all images have been played back, the slide show ends.

3 **Select [START] with the control button.**
The slide show begins.

To cancel the slide show

Select [CANCEL] in step **2** or **3**.

To skip to the next/previous image during slide show playback

Select ⏮/⏭ at the lower left of the LCD screen.
You can skip to the next/previous image by pressing the control buttons ▶/◀ while the menu bar is off.

To pause and restart the slide show

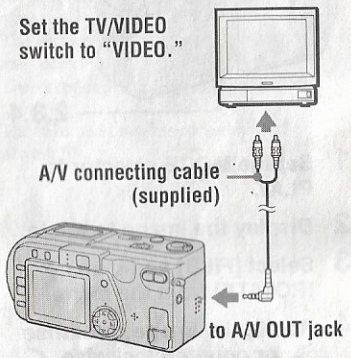
Select [❚❚]/[▶] at the bottom left of the screen or press the control button ● while the menu bar is off to pause and restart the slide show.

Note

The [INTERVAL] setting time is approximate, and may vary depending on the played back image size or other factors.

Viewing images on a TV screen

Before connecting your camera, be sure to turn off the TV.



1 Connect the A/V connecting cable to the A/V OUT jack of your camera and to the audio/video input jacks of the TV.
If your TV has stereo type audio input jacks, connect the audio plug of the A/V connecting cable to the Lch jack.

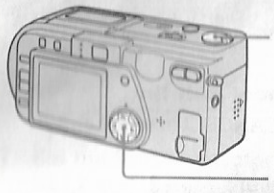
2 Turn on the TV, then start playback on your camera.
The playback image appears on the TV screen.

Note

You cannot use a TV that has an antenna (aerial) connector only.

Preventing accidental erasure (PROTECT)

The 🔑 (protect) indicator appears on protected images.



In single mode

1 Set the MODE selector to PLAY, then display the image to protect.

2 Select [FILE], [PROTECT], and then [ON] from the menu.
The displayed image is protected and 🔑 appears.

To release protection

Select [OFF] in step **2**.

In INDEX mode

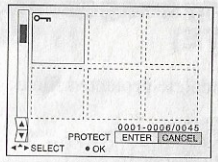
1 Set the MODE selector to PLAY, then display the INDEX screen.

2 Select [FILE], [PROTECT], and then [ALL] or [SELECT] from the menu.

3 When you select [ALL]
Select [ON].
All the images recorded in "Memory Stick" are protected.

When you select [SELECT]
Select all the images to protect with the control button, then select [ENTER].

The selected images are protected.

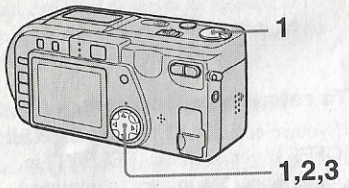


To release protection

If you selected [ALL] in step **2**, select [OFF]. If you selected [SELECT] in step **2**, select the images to unprotect with the control button, then select [ENTER].

Deleting images (DELETE)

You cannot delete protected files.



In single mode

1 Set the MODE selector to PLAY, then display the image to delete.

2 Select [DELETE] and then [OK] from the menu.
The image is deleted.

In INDEX mode

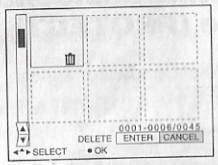
1 Set the MODE selector to PLAY, then display the INDEX screen.

2 Select [DELETE] and then [ALL] or [SELECT] from the menu.

3 When you select [ALL]
Select [ENTER].
All unprotected images are deleted.

When you select [SELECT]
Select all the images to delete with the control button, then select [ENTER].

The 🗑 (delete) indicator appears on the selected images and these images are deleted.



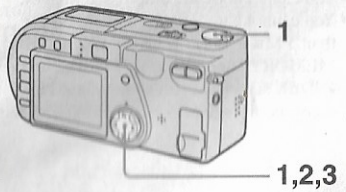
To cancel deleting

Select [CANCEL] in step **2** or **3**.

Note

If there are files on the "Memory Stick" with names having the same last 4 digits as the file name of the image to be deleted, these files are also deleted at the same time.

Changing the recorded still image size (RESIZE)



1 Set the MODE selector to PLAY and display the image to resize.

2 Select [TOOL] and then [RESIZE] from the menu.

3 Select the desired image size.
2048×1536, 1600×1200, 1280×960, 640×480
The changed image is recorded, then the display returns to the image display before resizing.

To return to the original size

Select [CANCEL] in step **3**.

Notes

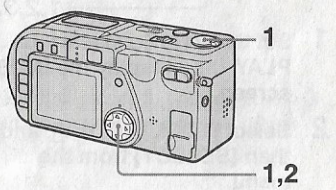
- You cannot change the size of images recorded in TEXT mode, uncompressed images or Clip Motion images.
- When you change from a small size to a large size, the picture quality deteriorates.
- The original image is retained even after resizing.
- The resized image is recorded as the newest file.

2048×1536
2048(3:2)
1600×1200
1280×960
640×480

Copying images (COPY)

You can copy images to another "Memory Stick."

In single mode



1 Set the MODE selector to PLAY, then display the image to copy.

2 Select [TOOL], [COPY], and then [OK] from the menu.
"MEMORY STICK ACCESS" appears.

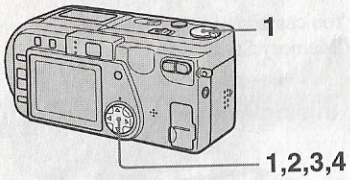
3 When "CHANGE MEMORY STICK" appears, eject the "Memory Stick."
"INSERT MEMORY STICK" appears.

4 Insert the "Memory Stick" on which to copy the image.
"RECORDING" appears. When copying is completed, "COMPLETE" appears.
To end copying, select [EXIT].

To copy the image to another "Memory Stick"

Select [CONTINUE] after step **4** and repeat steps **3** and **4**.

In INDEX mode



1 Set the MODE selector to PLAY, then display the INDEX screen.

2 Select [TOOL], [COPY], and then [SELECT] from the menu.

3 Select the image to copy.
The ✓ (select) indicator appears on the image.

4 Select [ENTER].
"MEMORY STICK ACCESS" appears.

5 When "CHANGE MEMORY STICK" is displayed, eject the "Memory Stick."
"INSERT MEMORY STICK" appears.

6 Insert another "Memory Stick."
"RECORDING" appears. When copying is completed, "COMPLETE" appears.
To end copying, select [EXIT].

To copy the image to another "Memory Stick"

Select [CONTINUE] after step **6** and repeat steps **5** and **6**.

To cancel copying part-way

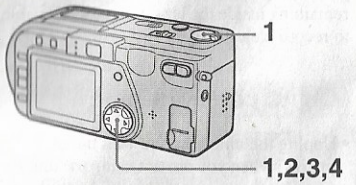
Change the MODE selector setting or turn off the power.

Notes

- If you do not select [EXIT] after "COMPLETE" appears and instead insert a new "Memory Stick," the same image is copied again.
- You cannot copy uncompressed images.
- You cannot copy images that are bigger than 5 MB at once. If "NOT ENOUGH MEMORY" appears or ✓ flashes on the INDEX screen, cancel some images to copy and try again.

Selecting still images to print (PRINT MARK)

You can mark a print mark on still images recorded with your camera. This mark is convenient when you have images printed at a shop that conforms with the DPOF (Digital Print Order Format) standard.



In single mode

1 Set the MODE selector to PLAY and display the image you want to print.

2 Select [FILE], [PRINT MARK], and then [ON] from the menu.
The 🖹✓ (print) mark is displayed on the image.

To unmark the print mark

Select [OFF] in step **2**.

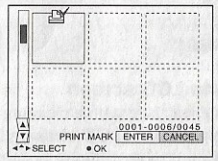
In INDEX mode

1 Set the MODE selector to PLAY, then display the INDEX screen.

2 Select [FILE], [PRINT MARK], and then [SELECT] from the menu.

3 Select the images to mark with the control button.

4 Select [ENTER].
🖹✓ of the selected images change from green to white.



To unmark selected print marks

Select the images to unmark in step **3** with the control button, then select [ENTER].

To unmark all the print marks

Select [FILE], [PRINT MARK], [ALL] and then [OFF] from the menu.
🖹✓ of all images are unmarked.

Notes

- You cannot mark moving images, Clip Motion images or images recorded in TEXT mode.
- If you mark an image recorded in TIFF mode with a print mark, only the uncompressed image is printed, and the JPEG image recorded at the same time is not printed.

Precautions

On cleaning

Cleaning the LCD screen

Wipe the screen surface with a cleaning cloth (not supplied) or a LCD cleaning kit (not supplied) to remove fingerprints, dust, etc.

Cleaning the camera surface

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface dry. Do not use any type of solvent such as thinner, alcohol or benzene as this may damage the finish or the casing.

After using your camera at the seashore or other dusty locations

Clean your camera carefully. Otherwise, the salty air may corrode the metal fittings or dust may enter the inside of your camera, causing a malfunction.

Note on operating temperature

Your camera is designed for use between the temperatures of 32°F and 104°F (0°C and 40°C). Recording in extremely cold or hot places that exceed this range is not recommended.

On moisture condensation

If the camera is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense inside or outside the camera. Should this occur, the camera will not operate properly.

Moisture condensation occurs easily when:

- The camera is brought from a cold location such as a ski slope into a warmly heated room.
- The camera is taken from an air-conditioned room or car interior to the hot outdoors, etc.

How to prevent moisture condensation

When bringing the camera from a cold place to a warm place, seal the camera in a plastic bag and allow it to adapt to conditions at the new location over a period of time (about an hour).

If moisture condensation occurs

Turn off the camera and wait about an hour for the moisture to evaporate. Note that if you attempt to record with moisture remaining inside the lens, you will be unable to record clear images.

On AC power adaptor

- Unplug the unit from the wall outlet (mains) when you are not using the unit for a long time.
- To disconnect the power cord (mains lead), pull it out by the plug. Never pull the power cord (mains lead) itself.
- Do not operate the unit with a damaged cord or if the unit has been dropped or damaged.
- Do not bend the power cord (mains lead) forcibly, or place a heavy object on it. This will damage the cord and may cause fire or electrical shock.
- Prevent metallic objects from coming into contact with the metal parts of the connecting section. If this happens, a short may occur and the unit may be damaged.
- Always keep metal contacts clean.
- Do not disassemble the unit.
- Do not apply mechanical shock or drop the unit.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment. AM reception and video operation are disturbed.
- The unit becomes warm during use. This is not a malfunction.
- Do not place the unit in locations that are:
  - —Extremely hot or cold
  - —Dusty or dirty
  - —Very humid
  - —Vibrating

On battery pack

- Use only the specified charger with the charging function.
- To prevent accident from a short circuit, do not allow metal objects to come into contact with the battery terminals.
- Keep the battery pack away from fire.
- Never expose the battery pack to temperatures above 140°F (60°C), such as in a car parked in the sun or under direct sunlight.
- Keep the battery pack dry.
- Do not expose the battery pack to any mechanical shock.
- Do not disassemble nor modify the battery pack.
- Install the battery pack to the camera securely.
- Charging while some capacity remains does not affect the original battery capacity.

If any problem occurs, unplug your camera and contact your nearest Sony dealer.

On internal rechargeable button battery

This camera has an internal rechargeable button battery for maintaining the date and time and other settings regardless of whether the power is on or off. This rechargeable button battery is constantly charged as long as you are using the camera. However, if you use the camera for only short periods it discharges gradually, and if you do not use the camera at all for about half a year it becomes completely discharged. In this case, be sure to charge this rechargeable button battery before using the camera. However, even if this rechargeable button battery is not charged, you can still use the camera as long as you do not record the date and time.

Charging method

Connect the camera to a wall outlet (mains) with the AC power adaptor, or install a charged battery pack, and leave the camera for 24 hours or more with the POWER switch set to OFF.

On "Memory Sticks"

"Memory Stick" is a new compact, portable and versatile IC recording medium with a data capacity that exceeds a floppy disk. "Memory Stick" is specially designed for exchanging and sharing digital data among "Memory Stick" compatible products. Because it is removable, "Memory Stick" can also be used for external data storage.

There are two types of "Memory Sticks": general "Memory Sticks" and "MagicGate Memory Sticks" that are equipped with the MagicGate* copyright protection technology.
You can use both types of "Memory Stick" with your camera. However, because your camera does not support the MagicGate standards, data recorded with your camera is not subject to MagicGate copyright protection.

* MagicGate is copyright protection technology that uses encryption technology.

Notes

- Do not remove the "Memory Stick" while reading or writing data.
- Data may be damaged if:
  - —you remove the "Memory Stick" or turn off your camera while reading or writing data.
  - —you use the "Memory Stick" in a location subject to the effects of static electricity or noise.
- Do not attach any other material than the supplied label on the labeling position.
- When you carry or store the "Memory Stick," put it in its supplied case.
- Do not touch the terminals of a "Memory Stick" with your hand or a metal object.
- Do not strike, bend or drop the "Memory Stick."
- Do not disassemble or modify the "Memory Stick."
- Do not allow the "Memory Stick" to get wet.

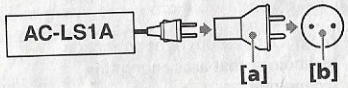
"Memory Stick", MEMORY STICK ™, "MagicGate Memory Stick" and MG are trademarks of Sony Corporation.

"MagicGate" and MAGICGATE are trademarks of Sony Corporation.

Using your camera abroad

Power sources

You can use your camera in any country or area with the supplied battery charger within 100 V to 240 V AC, 50/60 Hz. Use a commercially available AC plug adaptor **[a]**, if necessary, depending on the design of the wall outlet (mains) **[b]**.



Watching the playback picture on TV

If you want to view the playback picture on a TV, you need a TV having a video input jack and a video connecting cable.

The color system of the TV must be the same as that of your digital still camera. TV color systems differ from country to country. Check the following list:

NTSC system countries

Bahama Islands, Bolivia, Canada, Central America, Chile, Columbia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

PAL system countries

Australia, Austria, Belgium, China, Denmark, Finland, Germany, Great Britain, Holland, Hong Kong, Italy, Kuwait, Malaysia, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, Thailand, etc.

PAL-M system country

Brazil

PAL-N system countries

Argentina, Paraguay, Uruguay

SECAM system countries

Bulgaria, Czech Republic, France, Guiana, Hungary, Iran, Iraq, Monaco, Poland, Russia, Slovak Republic, Ukraine, etc.

Troubleshooting

If you experience trouble with your camera, first check the following items. Should your camera still not operate properly after you have made these checks, consult your Sony dealer or local authorized Sony service facility. If code displays (C:□□:□□) appear on the LCD screen, the self-diagnosis display function is working (page 64).

Symptom	Cause and/or Solution
Your camera does not work.	• You are not using an "InfoLITHIUM" battery pack. → Use an "InfoLITHIUM" battery pack (page 8). • The battery level is low (the ⌧ indicator appears on the LCD screen). → Charge the battery pack (page 9). • The AC power adaptor is not connected securely. → Connect it firmly to the DC IN jack of your camera and a wall outlet (mains) (page 11). • The built-in microcomputer is not working properly. → Disconnect and then reconnect all power sources after one minute. Then turn the power on by sliding the POWER switch and check that the camera works properly.
Your camera cannot record images.	• You cannot record images while the flash is charging. • The MODE selector is set to PLAY. → Set it to MOVIE or STILL (pages 15, 21). • No "Memory Stick" has been inserted into your camera. → Insert a "Memory Stick" (page 14). • The write-protect tab on the "Memory Stick" is set to LOCK. → Set it to the recording position.
The picture is out of focus.	• Your camera is not in macro recording mode when you shoot a subject that is about 4 to 19 3/4 inches (10 to 50 cm) away from the lens. → Set the macro recording mode (page 43). → Press the zoom button to set to the W side.
The resizing function does not work.	• You cannot resize moving images, text images and Clip Motion images.
You cannot display a print mark.	• You cannot display print marks on moving images, text images and Clip Motion images.

Symptom	Cause and/or Solution
The picture is noisy.	• Your camera is placed near a TV or other equipment that uses strong magnets. → Move your camera away from the TV, etc.
The picture is too dark.	• You are shooting a subject with a light source behind the subject. → Adjust the exposure (page 43). → Adjust the brightness of the LCD screen (page 38).
The flash does not work.	• The flash is set to ⊗. → Set the flash to auto (no indicator), ◐ or ϟ (page 20). • PROGRAM AE is set to the Twilight, Twilight plus, or Panfocus mode. → Cancel the mode (page 43) or set the flash to ϟ. • The MODE selector is set to MOVIE. → Set it to STILL.
The date and time are recorded incorrectly.	• The date and time are not set correctly. → Set the correct date and time (page 12).
Vertical streaks appear when you are shooting a very bright subject.	• The smear phenomenon is happening. → This is not a malfunction.
The battery life is short.	• You are recording/playing back images under extremely cold temperatures. • The battery pack is not charged enough. → Charge the battery pack fully. • The battery pack is dead. → Replace the battery pack with a new one (page 8).
The battery remaining indicator is incorrect.	• You have used the camera for a long time in an extremely hot or an extremely cold location. • The battery pack is dead. → Replace the battery pack with a new one (page 8). • The battery pack is discharged. → Install a fully charged battery pack (pages 8, 9).
The power goes off although the battery remaining indicator indicates that the battery pack has enough power to operate.	→ Fully charge the battery pack (page 9).

Symptom	Cause and/or Solution
Nothing appears in the display window or the indicators flash during charging.	• The AC power adaptor is disconnected. → Firmly connect the power cord to the wall outlet (page 11). • The battery pack has malfunctioned. → Contact your Sony dealer or local authorized Sony service facility. • The battery pack is not installed correctly. → Install the battery pack correctly (page 8).
The zoom does not work.	• PROGRAM AE is set to the Panfocus mode. → Cancel the Panfocus mode (page 43). • You cannot use zoom to record moving pictures.
Digital zoom does not function.	• You cannot use digital zoom when recording moving pictures or when the LCD screen is set to OFF. • Digital zoom is set to [OFF]. → Set digital zoom to [ON] at the menu.
Your camera cannot play back images.	• The MODE selector is set to STILL or MOVIE. → Set it to PLAY (page 22).
The image and sound are interfered by noise when you play back an image on a personal computer.	• You are playing back the file directly from the "Memory Stick." → Copy the file to the hard disk of the personal computer and then play back the file from the hard disk (page 28).
The image cannot be played back on a personal computer.	→ Consult the personal computer or software manufacturer.
Your camera cannot delete an image.	• The image is protected. → Cancel the protection (page 51).
The power turns off suddenly.	• With the MODE selector set to STILL or MOVIE, if you do not operate the camera for about three minutes while the power is on, the camera turns off automatically to prevent wearing down the battery. → Turn on the camera. • The battery is discharged. → Replace it with a fully charged battery. (pages 8, 9)
The image does not appear on the TV screen.	• The video output signal setting of your camera is incorrect. → Change the setting (page 38).

Symptom	Cause and/or Solution
A file error occurs when you play back a file.	• The image size is larger than 2048×1536. → Reduce the image size on your computer to 2048×1536 or smaller so that it can be played back on this camera.
The PROGRAM AE function does not work.	• The camera is set to text mode. → Cancel text mode (page 42).
The LCD screen freezes momentarily.	• This is a characteristic of the system and is not a malfunction.
The picture is monochrome (black and white).	• The camera is set to TEXT mode. → Cancel TEXT mode (page 42). • P.EFFECT is set to B&W mode. → Cancel B&W mode (page 46).
Your personal computer does not recognize your camera.	• The camera is turned off. → Turn on the camera. • The battery level is low. → Use the AC power adaptor (page 11). • The USB cable is not connected firmly. → Disconnect the USB cable, and connect it again firmly. Make sure that "PC MODE" is displayed on the LCD screen (page 26). • The USB connectors on your personal computer are connected to other equipment besides the keyboard, the mouse, and your camera. → Disconnect the USB cables except for the ones connected to the keyboard, the mouse, and your camera.
The lens does not retract even when the power is turned off.	• The battery is discharged. → Replace it with a fully charged battery or use the AC power adaptor.

Warning and notice messages

Various messages appear on the LCD screen. Check the corresponding descriptions in the following list.

Message	Meaning
NO MEMORY STICK	No "Memory Stick" has been inserted.
SYSTEM ERROR	Turn the power off and on again.
MEMORY STICK ERROR	The inserted "Memory Stick" cannot be used with your camera, or the "Memory Stick" is damaged or not inserted correctly.
FORMAT ERROR	Failed to format the "Memory Stick."
MEMORY STICK LOCKED	The write-protect tab on the "Memory Stick" is set to the LOCK position.
NO MEMORY SPACE	The capacity of the "Memory Stick" is full, and you cannot record or copy images.
NO FILE	No image has been recorded on the "Memory Stick."
FILE ERROR	An error occurred while playing back the image.
FILE PROTECT	The image is protected against erasure.
for "InfoLITHIUM" battery only	The battery is not the "InfoLITHIUM" type.
NOT ENOUGH MEMORY	The images you want to copy are too big to copy with your camera.
COPY ERROR	Copying was not performed correctly, or the "Memory Stick" was removed during copying.
DIRECTORY ERROR	A directory with the same name already exists.
IMAGE SIZE OVER	You are playing back an image of a size that cannot be played back with your camera.
INVALID OPERATION	You are playing back a file that was created on equipment other than your camera.
	The battery level is low or zero.
	The image is protected.

Symptom	Cause and/or Solution
A file error occurs when you play back a file.	• The image size is larger than 2048×1536. → Reduce the image size on your computer to 2048×1536 or smaller so that it can be played back on this camera.
The PROGRAM AE function does not work.	• The camera is set to text mode. → Cancel text mode (page 42).
The LCD screen freezes momentarily.	• This is a characteristic of the system and is not a malfunction.
The picture is monochrome (black and white).	• The camera is set to TEXT mode. → Cancel TEXT mode (page 42). • P.EFFECT is set to B&W mode. → Cancel B&W mode (page 46).
Your personal computer does not recognize your camera.	• The camera is turned off. → Turn on the camera. • The battery level is low. → Use the AC power adaptor (page 11). • The USB cable is not connected firmly. → Disconnect the USB cable, and connect it again firmly. Make sure that "PC MODE" is displayed on the LCD screen (page 26). • The USB connectors on your personal computer are connected to other equipment besides the keyboard, the mouse, and your camera. → Disconnect the USB cables except for the ones connected to the keyboard, the mouse, and your camera.
The lens does not retract even when the power is turned off.	• The battery is discharged. → Replace it with a fully charged battery or use the AC power adaptor.

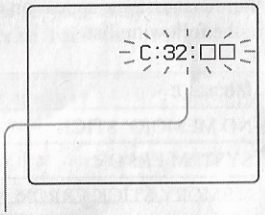
Warning and notice messages

Various messages appear on the LCD screen. Check the corresponding descriptions in the following list.

Message	Meaning
NO MEMORY STICK	No "Memory Stick" has been inserted.
SYSTEM ERROR	Turn the power off and on again.
MEMORY STICK ERROR	The inserted "Memory Stick" cannot be used with your camera, or the "Memory Stick" is damaged or not inserted correctly.
FORMAT ERROR	Failed to format the "Memory Stick."
MEMORY STICK LOCKED	The write-protect tab on the "Memory Stick" is set to the LOCK position.
NO MEMORY SPACE	The capacity of the "Memory Stick" is full, and you cannot record or copy images.
NO FILE	No image has been recorded on the "Memory Stick."
FILE ERROR	An error occurred while playing back the image.
FILE PROTECT	The image is protected against erasure.
for "InfoLITHIUM" battery only	The battery is not the "InfoLITHIUM" type.
NOT ENOUGH MEMORY	The images you want to copy are too big to copy with your camera.
COPY ERROR	Copying was not performed correctly, or the "Memory Stick" was removed during copying.
DIRECTORY ERROR	A directory with the same name already exists.
IMAGE SIZE OVER	You are playing back an image of a size that cannot be played back with your camera.
INVALID OPERATION	You are playing back a file that was created on equipment other than your camera.
	The battery level is low or zero.
	The image is protected.

Self-diagnosis display

Your camera has a self-diagnosis display. This function displays the camera condition on the LCD screen with a combination of a letter and four digits of numbers. If this occurs, check the following code chart. The code informs you of the camera's current condition. The last two digits (indicated by □□) will differ depending on the state of the camera.



Self-diagnosis display

- C:□□:□□
  You can reverse the camera malfunction yourself.
- E:□□:□□
  Contact your Sony dealer or local authorized Sony service facility.

First three digits	Cause and/or Corrective Action
C:32:□□	• There is trouble with your camera's hardware or zooming function. →Turn the power off and on again.
C:13:□□	• An unformatted "Memory Stick" is inserted. →Format the "Memory Stick" (page 35). • The inserted "Memory Stick" cannot be used with your camera, or is damaged. →Insert a new "Memory Stick" (page 14).
E:61:□□ E:91:□□	• A camera malfunction that you cannot reverse has occurred. →Contact your Sony dealer or local authorized Sony service facility and inform them of the 5-digit service code. (example: E:61:10)

If you are unable to solve the problem even after trying the corrective actions a few times, contact your Sony dealer or local authorized Sony service facility.

When a self-diagnosis display appears

The error display appears on the display window (page 66).

Specifications

System

Image device
1/1.8 type color CCD

Lens
3× zoom lens
f = 8 – 24 mm
(39 – 117 mm when converted into a 35 mm still camera)
F = 2.8 – 5.3

Exposure control
Automatic exposure

White balance
Automatic, Indoor, Outdoor, Hold

Data system
Movie: MPEG1
Still: JPEG, GIF (in TEXT mode, Clip Motion), TIFF
Audio with still image: MPEG1 (Monaural)

Recording medium
"Memory Stick"

Flash
Recommended recording distance:
W side: 1 5/8 feet to 7 1/2 feet (0.5 m to 2.3 m)
T side: 1 5/8 feet to 3 7/8 feet (0.5 m to 1.2 m)

Output connector
A/V OUT (Monaural)
Mini jack
Video: 1 Vp-p, 75 Ω unbalanced, sync negative
Audio: 327 mV (at a 47 kΩ load)
Output impedance: 2.2 kΩ

USB jack
mini-B

LCD screen

Used LCD panel
1.5 type TFT (Thin Film Transistor active matrix) drive

Total number of dots
123 200 (560×220) dots

General

Used battery pack
NP-FS11

Power requirements
3.6 V

Power consumption (during recording)
3.0 W

Operation temperature
32°F to 104°F
(0°C to 40°C)

Storage temperature
–4°F to +140°F
(–20°C to +60°C)

Dimensions
4 1/2×2 1/8×1 3/4 inches (113.0×53.9×43.8 mm) (w/h/d) (excluding maximum protrusions)

Mass
Approx. 8.8 oz (250 g) (including battery pack NP-FS11, "Memory Stick," and wrist strap etc.)

Built-in microphone
Electret condenser microphone

Built-in speaker
Dynamic speaker

AC-LS1A AC power adaptor

Power requirements
100 to 240 V AC, 50/60 Hz

Rated output voltage
DC 4.2 V, 1.5 A in operating mode

Operation temperature
32°F to 104°F (0°C to 40°C)

Storage temperature
–4°F to +140°F
(–20°C to +60°C)

Maximum dimensions
4 1/4×1 7/16×2 1/4 inches (105×36×56 mm) (w/h/d) (excluding maximum protrusions)

Mass
Approx. 6 oz (180 g) (power adaptor only)

NP-FS11 battery pack

Used battery
Lithium ion battery

Maximum voltage
DC 4.2 V

Nominal voltage
DC 3.6 V

Capacity
4.1 Wh (1 140 mAh)

Dimensions
1 1/4×21/32×2 inches (30.3×16.3×50.2 mm) (w/h/d)

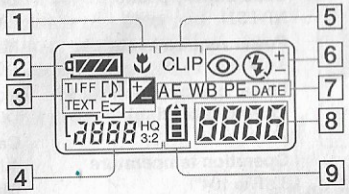
Mass
Approx. 1.4 oz (40 g)

Accessories

A/V connecting cable (1)
NP-FS11 battery pack (1)
AC-LS1A AC power adaptor (1)
Power cord (1)
USB cable (1)
Wrist strap (1)
"Memory Stick" (8 MB) (1)
CD-ROM (1)
Operating Instructions (1)

Design and specifications are subject to change without notice.

Display window indicators



1 Macro indicator

2 Battery remaining indicator

3 Recording mode/EV level indicator

4 Image size indicator

5 Clip Motion indicator

6 Flash mode/flash level indicator

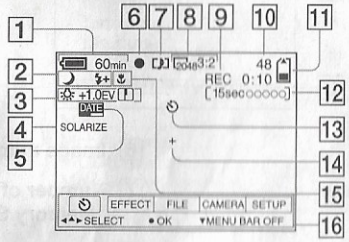
7 PROGRAM AE indicator
White balance indicator
Picture effect indicator
Date/time indicator

8 Battery usable time indicator (displayed only during charging)
Number of recorded images
Error display
Err: Some kind of misoperation has occurred. Check the self-diagnosis display on the LCD screen (page 64) and take the appropriate corrective action.
LENS: A problem has occurred with lens drive. Turn the camera on and off several times, and if the problem persists, contact your Sony dealer or authorized Sony service facility.

9 "Memory Stick" remaining indicator

LCD screen indicators

The indicators during recording



1 Battery remaining indicator

2 PROGRAM AE/flash level/flash mode indicator

3 White balance/EV level/ sharpness indicator

4 Picture effect indicator

5 Date/time indicator

6 AE lock indicator/Focus lock indicator

7 Recording mode/Clip Motion indicator

8 Image size indicator

9 Self-diagnosis function/ recording time indicator

10 Number of recorded images

11 Remaining memory capacity indicator

12 Moving image/VOICE recording time indicator

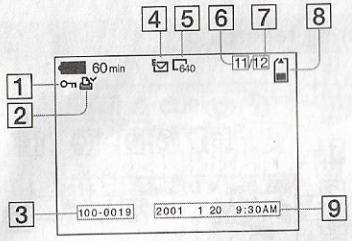
13 Self-timer indicator

14 Spot light-metering indicator

15 Macro mode indicator

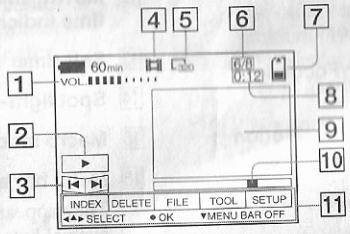
16 Menu bar and guide menu
They appear by pressing ▲ on the control button and disappear by pressing ▼ of it.

When playing back still images



1 Protect indicator
2 Print mark indicator
3 File name
4 Recording mode/Clip Motion indicator
5 Image size indicator
6 Image number
7 Number of stored images in "Memory Stick"
8 Remaining memory capacity indicator
9 Recording date of the playback image/menu bar and guide menu

When playing back moving images



1 VOL. (Volume) indicator
2 Playback/pause buttons
▶: during pause
❚❚: during playback
3 Fast-forward/rewind buttons
4 Recording mode indicator
5 Image size indicator
6 Image number/number of stored images in "Memory Stick"
7 Remaining memory capacity indicator
8 Counter
9 Playback image
10 Play bar
11 Menu bar and guide menu

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